

## STEAM GENERATORS

<u>TAC Nos.</u>	<u>Description</u>	Last Update: 07/06/05
M88885	Steam Generator (SG) Integrity Rulemaking	Lead Division: DLPM
M99432	GL: SG Tube Integrity	Supporting Divisions: DE, DIPM, DSSA
MA4265	NEI 97-06	Supporting Office: RES
MA5037	SG Action Plan	
MA5260	DPO on SG Issues	
MA7147	GS1-163	
MA9881	Regulatory Issue Summary - IP2 SG Tube Failure	
MB0258	SG Action Plan Administration	
MB0553	SG Inspection Program	
MB0576	Licensee SG Inspection Results Summary Reports & SG Tube Integrity Amendment Review Guidance	
MB0631	SG Workshop	
MB0633	OL No. 803 Revisions per SG Action Plan	
MB0737	IIPB SG Action Plan Activities	
MB2446	SG Risk Communication	
MB3794	SG Communication Plan	
MB7216	SG DPO Followup	
MB7842/3	Catawba Pilot Plant Application (Fee billable, not added to AGAP total)	
MC1550	NEI 97-06 Review	
MC2470	SG Tube Integrity & Associated Technical Specifications	
MC4330	SG Technical Specification Generic Review - ACRS Interface	

Item No. (TAC No.)	Milestone	Date  (T=Target) (C=Complete)	Lead	Support
1.17	Publish Notice of Availability of TSTF in <i>FR</i> (NEI 97-06)	05/06/05 (C)	DRIP N. Salgado	
1.21 (MC2470)	Staff issues a Generic Letter requesting PWR licensees to address adequacy of their technical specifications to ensure tube integrity between inspections and how bending loads are assessed in their tube integrity evaluations	TBD (T) Note 12	DE L. Lund	

Item No. (TAC No.)	Milestone	Date (T=Target) (C=Complete)	Lead	Support
3.1 (MB7216)	<p>In order to address ACRS comments on current risk assessments, develop a better understanding of the potential for damage progression of multiple steam generator (SG) tubes due to depressurization of the SGs (e.g., during a main steam line break (MSLB) or other type of secondary side design basis accident). (Pgs. 46, 8-12) (See Notes 4, 5, and 6)</p> <p>Specific tasks include:</p> <p>a) Perform thermal-hydraulic (T-H) calculations and sensitivity studies using the 3-D hydraulic component of TRAC-M to assess the loads on the tube support plate and SG tubes during main steam line break (MSLB). Perform sensitivity studies on code and model parameters including numerics. Develop conservative estimate of loads and evaluate against similar analyses.</p> <p>b) Perform T-H assessment of flow-induced vibrations during MSLB. Using the T-H conditions calculated during the transient, generate a conservative estimate of flow-induced vibration displacement and frequency assuming steady state behavior.</p>	<p>12/31/02 (C) ML023650132</p> <p>12/31/02 (C) ML023650132</p>	<p>RES W. Krotiuk</p> <p>RES W. Krotiuk</p>	<p>DSSA W. Jensen</p> <p>DSSA W. Jensen</p>

Item No. (TAC No.)	Milestone	Date (T=Target) (C=Complete)	Lead	Support
3.1 (continued)	c) Perform additional sensitivity studies as needed.	06/30/03 (C)	RES W. Krotiuk	SSA W. Jensen
	d) Obtain information from existing analyses related to loads and displacements (axial, bending, cyclic) experienced by SG structures under MSLB conditions.	12/31/02 (C) ML030230822 Non-public	RES J. Muscara	
	e) Using information from tasks 3.1a, 3.1b, and 3.1d, estimate upper bound loads and displacements.	12/31/02 (C) ML030230822 Non-public	RES J. Muscara	DE E. Murphy
	f) Estimate crack growth, if any, for a range of crack types and sizes using bounding loads from task 3.1e in addition to the pressure stresses. Include the effects of TSP movement in these evaluations and any effects from cyclic loads.	12/31/02 (C) ML030230822 Non-public	RES J. Muscara	DE E. Murphy
	g) Estimate the margins to crack propagation for a range of crack sizes for MSLB types loads and displacements in addition to the pressure stress.	12/31/02 (C) ML030230822 Non-public	RES J. Muscara	DE E. Murphy
	h) Based on the margins calculated in task 3.1g over and above the bounding loads, decide if more refined TH analyses need to be conducted to obtain forces and displacements of structures under MSLB conditions.	12/31/02 (C) ML030230822 Non-public	RES J. Muscara	DE E. Murphy

Item No. (TAC No.)	Milestone	Date (T=Target) (C=Complete)	Lead	Support
3.1 (continued)	<p>l) Conduct tests of degraded tubes under pressure and with axial and bending loads to validate the analytical results from above tasks.</p> <p>j) Conduct analyses similar to above with refined load estimates if necessary.</p> <p>k) Use information developed in tasks 3.1a through 3.1j to evaluate the conditional probabilities of multiple tube failures for appropriate scenarios in risk assessments for SG tube alternate repair criteria (ARC).</p>	<p>06/30/03 (C) ML032080002 (Non-public)</p> <p>06/30/04 (C) ML042720174</p> <p>TBD (T) Note 14</p>	<p>RES J. Muscara</p> <p>RES J. Muscara</p> <p>DSSA S. Long</p>	<p>DE E. Murphy</p> <p>DE E. Murphy</p> <p>DE E. Murphy RES J. Muscara H. Woods</p>
3.2	<p>Confirm that damage progression via jet cutting of adjacent tubes is of low enough probability that it can be neglected in accident analyses. (Pgs. 10-11) (See Notes 3 and 5)</p> <p>Specific tasks include:</p> <p>a) Complete tests of jet impingement under MSB conditions.</p> <p>b) Conduct long duration tests of jet impingement under severe accident conditions.</p> <p>c) Document results from tasks 3.2a and 3.2b.</p>	<p>12/31/01 (C) ML021910311</p> <p>12/31/01 (C) ML021910311</p> <p>12/31/01 (C) ML021910311</p>	<p>RES J. Muscara</p> <p>RES J. Muscara</p> <p>RES J. Muscara</p>	<p>DE E. Murphy</p> <p>DE E. Murphy</p> <p>DE E. Murphy</p>
3.3 (MB7216)	<p>When available, use data from the ARTIST program (planned in Switzerland) to develop a better model of the natural mitigation of the radionuclide release that could occur in the secondary side of the SGs. (Pgs. 12-13) (See Notes 3 and 5)</p>	<p>09/30/05 (T) See Note 2</p>	<p>RES R. Lee</p>	<p>DSSA S. Long</p>

Item No. (TAC No.)	Milestone	Date  (T=Target) (C=Complete)	Lead	Support
3.4 (MB7216)	<p>In order to address ACRS criticism of current risk assessments, develop a better understanding of RCS conditions and the corresponding component behavior (including tubes) under severe accident conditions in which the RCS remains pressurized. (Pgs. 46-47, 12-15) (See Notes 3 and 5)</p> <p>Specific tasks include:</p> <p>a) Perform system level analyses to assess the impact of plant sequence variations (e.g., pump seal leakage and SG tube leakage).</p> <p>b.1) Re-evaluate existing system level code assumptions and simplifications.</p> <p>b.2) Following the results from 3.4.a and 3.4.b.1, perform additional analysis to: include modeling of heat transfer enhancement from radiation heat transfer in the hot leg and steam generator; suppress unphysical numerically driven flows in the calculations; and investigate the sensitivity of calculated results to bypass flows and other key parameters.</p> <p>c) Examine 1/7 scale data to assess tube to tube temperature variations and estimate variations for plant scale.</p> <p>d) Perform more rigorous uncertainty analyses with system level code to address the uncertainty caused by key governing parameters. Distribution functions will be developed for key parameters. Peer review.</p>	<p>09/28/01 (C) ML012720004</p> <p>04/12/02 (C)</p> <p>04/01/04 (C) ML040910022 (Non-public)</p> <p>08/31/02 (C)</p> <p>03/31/06 (T) Note 13</p>	<p>RES C. Tinkler</p> <p>RES D. Bessett</p> <p>RES C. Boyd</p> <p>RES D. Bessett</p> <p>RES C. Boyd</p>	<p>DSSA W. Jensen S. Long</p> <p>DSSA W. Jensen S. Long DSSA W. Jensen</p> <p>DSSA W. Jensen S. Long</p> <p>DSSA W. Jensen S. Long</p>

Item No. (TAC No.)	Milestone	Date (T=Target) (C=Complete)	Lead	Support
3.4 (continued)	<p>e) Examine SG tube severe accident T-H conditions using computational fluid dynamics (CFD) methods. This includes the following:</p> <p>e.1) Benchmark CFD methods against 1/7 scale test data.</p> <p>e.2) Perform full scale plant calculations (hot leg and SG) for a 4 loop Westinghouse design. Evaluate scale effects.</p> <p>e.3) Perform plant analysis to address the effects on inlet plenum mixing resulting from tube leakage and hot leg orientation (CE design impact).</p> <p>f) Examine the uncertainty in the T-H conditions associated with core melt progression.</p> <p>g) Perform experiments to develop data on inlet plenum mixing impacts due to SG tube leakage and hot leg/ inlet plenum configuration.</p> <p>h) Perform a systematic examination of the alternate vulnerable locations in the RCS that are subject to failure due to severe accident conditions. This includes the following:</p> <p>h.1) Evaluate the creep failure of primary system passive components such as pressurizer surge line and the hot leg taking into account the material properties of the base metal, welds, and heat affected zones in the presence of residual and applied stresses, in addition to the pressure stress, and the presence of flaws.</p>	<p>08/31/01 (C) NUREG 1781 ML033140399</p> <p>03/28/02 (C) NUREG 1788 ML041820075 (Non-public)</p> <p>12/30/02 (C) NUREG 1788 ML041820075 (Non-public)</p> <p>01/25/05 (C) Note 13</p> <p>03/31/03 (C) See Note 15</p> <p>TBD (T) See Note 18</p>	<p>RES C. Boyd</p> <p>RES C. Boyd</p> <p>RES C. Boyd</p> <p>RES C. Boyd</p> <p>RES D. Bessett</p> <p>RES J. Page</p>	<p>DSSA W. Jensen S. Long</p> <p>DSSA W. Jensen S. Long</p> <p>DSSA W. Jensen S. Long</p> <p>DSSA W. Jensen S. Long</p> <p>DSSA W. Jensen S. Long</p> <p>DE E. Murphy C. Hammer DSSA S. Long</p>

Item No. (TAC No.)	Milestone	Date  (T=Target) (C=Complete)	Lead	Support
3.4 (continued)	h.2) Evaluate the failure of active components such as PORVs, safety valves, and bolted seals based on operability and "weakest link" considerations for these components.	TBD (T) Note 18	RES J. Page	DE E. Murphy C. Hammer DSSA S. Long
	h.3) Conduct large scale tests if needed.	11/30/05 (T)	RES J. Page	DE E. Murphy C. Hammer DSSA S. Long
	l) Use existing international data and develop analyses for predicting leak rates of degraded tubes in restricted areas under design basis and severe accident conditions.	05/28/04 (C) ML042720174	RES J. Muscara	DSSA S. Long DE E. Murphy
	j) Put the information developed in task 3.4i into a probability distribution for the rate of tube leakage during severe accident sequences, based on the measured and regulated parameters for ARCs applied to flaws in restricted places (e.g., drilled-hole TSPs and the unexpanded sections of tubes in tube sheets).	TBD (T) Note 17	DSSA S. Long	DE E. Murphy RES J. Muscara
	k) Integrate information provided by tasks 3.4a through 3.4j and 3.5 to address ACRS criticisms of risk assessments for ARCs that go beyond the scope and criteria of GL 95-05 (e.g., ARCs that credit "indications restricted against burst") as well as dealing with other SG tube integrity and licensing issues (e.g., relaxation of SG tube inspection requirements).	TBD (T) Note 19	DSSA S. Long	DE E. Murphy RES J. Muscara C. Boyd H. Woods

Item No. (TAC No.)	Milestone	Date (T=Target) (C=Complete)	Lead	Support
3.5 (MB7216)	<p>Develop improved methods for assessing the risk associated with SG tubes under accident conditions. (Pgs. 47, 16-20) (See Note 5)</p> <p>Specific tasks include:</p> <p>a) Development of an integrated framework for assessing the risk for the high-temperature/high-pressure accident scenarios of interest.</p> <p>b) Issue report describing improved methods and appropriate treatment of uncertainty for identifying severe accident scenarios that lead to challenges of the reactor coolant pressure boundary.</p> <p>c) Develop logic framework for improved PRA models of the scenarios identified above, including the impact of operator actions.</p> <p>d) Using the 3.5(b) methods and (c) logic framework, identify scenarios, calculate the frequency of containment bypass events at an example plant, make indicated method improvements, and document the improved methods and results.</p>	<p>04/01/02 (C) ML020910624</p> <p>06/28/03 (C) ML031810770</p> <p>04/06/04 (C) ML041400397 (Non-public)</p> <p>See Note 16</p>	<p>RES H. Woods</p> <p>RES H Woods</p> <p>RES H. Woods</p> <p>RES H. Woods</p>	<p>DSSA S. Long</p> <p>DSSA S. Long</p> <p>DSSA S. Long</p> <p>DSSA S. Long</p>

Item No. (TAC No.)	Milestone	Date  (T=Target) (C=Complete)	Lead	Support
3.5 (continued)	<p>e) Extend the 3.5(b) methods and (c) model logic to include CE plants, and document them.</p> <p>f) Extend the 3.5(b) methods and (c) model logic to include consideration of external events as initiators, and low power and shutdown as initial conditions, and document them.</p> <p>g) Extend the 3.5(d), (e), and (f) improved methods and logic to include consideration of core damage sequences initiated by secondary depressurization events (such as MSLB design basis accident scenarios) that induce tube rupture.</p>	<p>TBD (T) See Note 16</p> <p>TBD (T) See Note 16</p> <p>TBD See Note 16</p>	<p>RES M. Junge</p> <p>RES M. Junge</p> <p>RES M. Junge</p>	<p>DSSA S. Long</p> <p>DSSA S. Long</p> <p>DSSA S. Long</p>
3.6	To address an ACRS report conclusion that improvements can be made over the current use of a constant probability of detection (POD) for flaws in SG tubes, RES has recently completed an eddy current round robin inspection exercise on a SG mock-up as part of NRC's research to independently evaluate and quantify the inservice inspection reliability for SG tubes. This research has produced results that relate the POD to crack size, voltage, and other flaw severity parameters for stress corrosion cracks at different tube locations using industry qualified teams and procedures. Complete analysis of research results and prepare topical report to document the results. (Pgs. 47, 33)	12/31/01 (C) ML021910311	RES J. Muscara	DE E. Murphy
3.7 (MB7216)	Assess the need for better leakage correlations as a function of voltage for 7/8" SG tubes. (Pgs. 48, 28-29) (See Note 5)	04/26/03 (C) ML031150674	DE J. Tsao	RES J. Muscara
3.8 (MB0258)	Develop a program to monitor the prediction of flaw growth for systematic deviations from	01/03/02 (C) ML020070081	DE J. Tsao	

Item No. (TAC No.)	Milestone	Date (T=Target) (C=Complete)	Lead	Support
3.9 (MB7216)	<p>Develop a more technically defensible position on the treatment of radio nuclide release to be used in the safety analyses of design basis events. (Pgs. 48, 38-44) (See Note 5)</p> <p>Specific tasks include:</p> <p>a) Assess Adams and Atwood and Adams and Sattison spiking data with respect to the ACRS comments.</p> <p>b) Based upon the assessment performed in task 3.9a, develop a response to the ACRS comments.</p> <p>c) Publish in the <i>Federal Register</i> for public comment, the response to ACRS' comments.</p> <p>d) Complete review of public comments.</p> <p>e) Based upon task 3.9d, determine if additional work needs to be performed.</p>	<p>08/09/01 (C)</p> <p>TBD (T) Note 11</p> <p>TBD (T) Note 11</p> <p>TBD (T) Note 11</p> <p>TBD (T) Note 11</p>	DSSA M. Hart	
3.10 (MB7216)	<p>To address concerns in the ACRS report regarding our current level of understanding of stress corrosion cracking, the limitations of current laboratory data, the difficulties with using the current laboratory data for predicting field experience (crack initiation, crack growth rates), and the notion that crack growth should not be linear with time while voltage growth is, the following tasks will be performed: (Pgs. 20-29) (See last sentence in Note 3)</p>			

Item No. (TAC No.)	Milestone	Date (T=Target) (C=Complete)	Lead	Support
3.10 (continued)	<p>Specific tasks include:</p> <p>a) Conduct tests to evaluate crack initiation, evolution, and growth. Tests to be conducted under prototypic field conditions with respect to stresses, temperatures and environments. Some tests will be conducted using tubular specimens.</p> <p>b) Using the extensive experience on stress corrosion cracking in operating SGs, and results from laboratory testing under prototypic conditions, develop models for predicting the cracking behavior of SG tubing in the operating environment.</p> <p>c) Based on the knowledge accumulated on stress corrosion cracking behavior and the properties of eddy current testing, attempt to explain the observed relationship between changes in eddy current signal voltage response and crack growth.</p>	<p>12/31/05 (T)</p> <p>12/31/06 (T)</p> <p>12/31/05 (T)</p>	<p>RES J. Muscara</p> <p>RES J. Muscara</p> <p>RES J. Muscara</p>	<p>DE E. Murphy</p> <p>DE E. Murphy</p> <p>DE E. Murphy</p>
3.11	In order to resolve GSI 163, it is necessary to complete the work associated with tasks 3.1 through 3.5 and 3.7 through 3.9. Upon completion of those tasks, develop detailed milestones associated with preparing a GSI resolution document and obtaining the necessary approvals for closing the GSI, including ACRS acceptance of the resolution. (See Note 9)	12/31/05 (T)	DLPM DE E. Murphy	DSSA S. Long
3.12	Develop outline and a detailed schedule for completing DG 1073, "Plant Specific Risk-Informed Decision Making: Induced SG Tube Rupture (See Note 9)	12/31/05 (T)	DE E. Murphy	DSSA S. Long

Notes:

1. For SG Action Plan milestones associated with the SG DPO (i.e., Item Nos. 3.1 - 3.11), the page numbers referenced in the milestone description indicate the source of the milestone as described in ACRS Report NUREG-1740, "Voltage-Based Alternative Repair Criteria." The ACRS report was included as an enclosure to a memorandum from D. Powers to W. Travers dated February 1, 2001 (Accession No. ML010780125).
2. NRC has entered into an agreement in April 2003 with Paul Scherrer Institute (PSI) of Switzerland, to participate in the ARTIST program. Testing is to commence in 2004 and is scheduled to be complete in 2007. Some preliminary experimental data from the initial phase of testing will be available in 2004.
3. The work described in this milestone is related, in part, to previously planned work associated with an NRR User Need request dated February 8, 2000 (Accession No. ML003682135), and the associated RES response to the request dated September 7, 2000 (Accession No. ML003714399). In addition, portions of this work were undertaken on an anticipatory basis by RES.
4. The work described in this milestone is related, in part, to previously planned work associated with GSI 188, "Steam Generator Tube Leaks/Ruptures Concurrent with Containment Bypass."
5. The work described in this milestone is related, in part, to previously planned work associated with GSI 163, "Multiple Steam Generator Tube Leakage."
6. The thermal-hydraulic analyses (items 3.1a through 3.1c) will provide input into the tube integrity analyses (items 3.1d through 3.1j) on an on-going basis. The end dates for these two areas coincide because of the close integration between these two RES efforts. Also, the end dates reflect the target date for the final report documenting the RES findings.
7. Item Nos. 1.1 through 2.8 in the above table were developed from Attachment 1 of a memorandum from J. Zwolinski, J. Strosnider, B. Boger and G. Holahan to B. Sheron and R. Borchardt dated March 23, 2001 (Accession No. ML010820457). That memorandum provided a revision to the Steam Generator Action Plan that was originally issued via a memorandum from B. Sheron and J. Johnson to S. Collins dated November 16, 2000 (Accession No. ML003770259).
8. Item Nos. 3.1 through 3.11 in the above table were developed from Attachment 1 of a memorandum from S. Collins and A. Thadani to W. Travers dated May 11, 2001 (Accession No. ML011300073). That memorandum provided a revision to the Steam Generator Action Plan as requested by a memorandum from W. Travers to S. Collins and A. Thadani dated March 5, 2001 (Accession No. ML010670217).
9. The completion date assumes need for large scale test.
10. The ADAMS accession no. listed under "Date" is the closure document.
11. The scope of the work is being re-evaluated. In SECY-04-0156, dated August 27, 2004, Iodine Spiking Phenomena was identified as candidate generic safety issue (GSI) 197 with the Office of Nuclear Regulatory Research (RES) listed as the lead organization. Initial screening of the candidate GSI is ongoing. A schedule will be developed once screening is completed.
12. A draft version of the generic letter (GL 2004-xx, Steam Generator Tube Integrity and Associated Technical Specifications) was issued for a 60 day comment period in the *Federal Register* (FR) in October 2004, and public comments have been received. This GL will request licensees (1) to discuss the adequacy of their steam generator tube integrity program and their plans for modifying their TS to ensure they are representative of their program and (2) to discuss how bending loads are assessed in their evaluations of tube integrity. The licensees that have adopted the new

version of the TS will not be required to respond to the GL. One of the comments is that the staff should wait to issue the Generic Letter until some time period after TSTF-449 has been approved for use. The staff is evaluating the comment to allow licensees more time to submit a TS amendment in response to the TSTF approved for use and published in the FR on 5/6/05.

13. March 31, 2006, is the currently estimated target date for milestone 3.4.d. Although milestone 3.4.f has been completed as planned in the RES Operating Plan, the core melt progression will be revisited under 3.4.d during the full evaluation of uncertainty.
14. Task completion is delayed due to assignment of staff to higher priority work on PTS.
15. This milestone was not performed as evaluation of the cost to perform experiments that would improve upon the Westinghouse experiments showed the cost to be prohibited. CFD analysis provided better information than possible experiments at a very small fraction of the cost. Hence, the objective was satisfied by the completion of milestone 3.4.e.2.
16. The NRR and RES staff are currently reviewing the results of the work completed under 3.5(d). Discussions are underway to decide future actions needed to complete items 3.5(d) thru (g).
17. The results from this item feed into the task for calculating the severe accident induced steam generator containment bypass probabilities. New completion dates need to be developed based on scheduled completion of 3.4 and 3.5 milestones.
18. The results of the PRA work described in 3.5.d and approval by RES management of the details associated with completing this work scope, will help identify the level of effort needed to complete this work and the associated schedules.
19. The task is dependent on completion of preceding 3.4 subtasks and all 3.5 subtasks. New completion dates need to be developed based on scheduled completion of 3.4 and 3.5 milestones.

Description: This plan consolidates numerous activities related to steam generators including: 1) the NRC's review of the industry initiative related to steam generator tube integrity (i.e., NEI 97-06); 2) GSI-163 (Multiple Steam Generator Tube Leakage); 3) the NRC's Indian Point 2 (IP2) Lessons Learned Task Group recommendations; 4) the Office of the Inspector General (OIG) report on the IP2 steam generator tube failure event; and 5) the differing professional opinion (DPO) on steam generator issues. The plan does not address plant-specific reviews or industry proposed modifications to the Generic Letter 95-05 (voltage-based tube repair criteria) methodology. The plan also includes non-steam generator related issues that arose out of recent steam generator related activities (e.g., Emergency Preparedness issues from the OIG report). The milestone table shown above is organized as follows:

- Item Nos. 1.1 through 1.21: SG-related issues (not including the DPO-related issues);
- Item Nos. 2.1 through 2.8: Non-SG related issues; and
- Item Nos. 3.1 through 3.11: DPO-related issues.

Historical Background: The NRC originally planned to develop a rule pertaining to steam generator tube integrity. The proposed rule was to implement a more flexible regulatory framework for steam generator surveillance and maintenance activities that allows a degradation specific management approach. The results of the regulatory analysis suggested that the more optimal regulatory approach was to utilize a generic letter. The NRC staff suggested, and the Commission subsequently approved, a revision to the regulatory approach to utilize a generic letter. In SECY-98-248, the staff recommended to the Commission that the proposed GL be put on hold for 3 months while the staff works with NEI on their NEI 97-06 initiative. In the staff requirements memorandum dated December 21, 1998, the Commission did not object to the staff's recommendation. In late 1998 and 1999 the NRC and industry addressed NRC technical and regulatory concerns with the NEI 97-06 initiative, and on February 4, 2000, NEI submitted the generic licensing change package for NRC review. The generic licensing change package included NEI

97-06, Revision 1, proposed generic technical specifications, and a model technical requirements manual section. SECY-00-0078 outlines the staff's proposed review process associated with the revised steam generator tube integrity regulatory framework described in NEI 97-06. This review process was subsequently revised as described in SECY-03-0080 (see Note 12).

Originating Document: Memorandum from B. Sheron/J. Johnson to S. Collins dated November 16, 2000, "Steam Generator Action Plan" (Accession No. ML003770259).

Regulatory Assessment: The current regulatory framework provides reasonable assurance that operating PWRs are safe. Improvements to the regulatory framework are being pursued through the NEI 97-06 initiative.

Current Status:

- November 1, 2000      Issuance of "Indian Point 2 Steam Generator Tube Failure Lessons-Learned Report" via memorandum from W. Travers to the Commission (Accession No. ML003765272).
- November 3, 2000      Issuance of "Staff Review of OIG Report on the NRC's Response to the Steam Generator Tube Failure at Indian Point 2 and Related Issues" via memorandum from W. Travers to the Commission (Accession No. ML003753067).
- November 16, 2000      Issuance of "Steam Generator Action Plan" via memorandum from B. Sheron/J. Johnson to S. Collins (Accession No. ML003770259).
- February 1, 2001      ACRS Ad Hoc Subcommittee report related to SG DPO issued (NUREG-1740).
- May 11, 2001            Issuance of a memorandum providing a revision to the SG Action Plan to address the issues related to the DPO on SG tube integrity issues (Accession No. ML011300073).
- September 26, 2001    Staff briefing of ACRS subcommittee on Materials and Metallurgy regarding SG action plan status.
- September 26, 2001    Staff briefing of ACRS Subcommittee on Materials and Metallurgy on SG action plan.
- October 4, 2001        Staff briefing of ACRS full-committee on SG action plan status.
- October 18, 2001       ACRS letter to the Chairman documenting their comment on staff action plan to address the SG DPO (ML012960166).
- November 29, 2001    Staff briefing of ACRS Subcommittee on Materials and Metallurgy on NEI 97-06.
- December 3, 2001      Staff briefing of the Commission on the status of SG action plan.
- December 06, 2001    Staff briefing of ACRS on NEI 97-06.
- May 16, 2003            Issuance of SECY-03-0080, "Steam Generator Tube Integrity (SGTI) - Plans for Revising the Associated Regulatory Framework."
- May 29, 2003            Staff briefing of the Commission on the status of SG Regulatory Framework Modifications. An industry briefing preceded the staff briefing.
- February 3-5, 2004    Staff briefing of the joint ACRS Subcommittee on Materials/Metallurgy and Thermal/Hydraulics, and the Full Committee on SG DPO related action items.

- May 21, 2004      ACRS letter to the EDO documenting their comment on staff action plan to address the SG DPO (ML041420237).
- August 25, 2004      Response to ACRS from the EDO on their comments on staff action plan to address the SG DPO (ML042400055)